(FILE 'HOME' ENTERED AT 13:00:25 ON 17 FEB 2004)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 13:00:38 ON 17 FEB 2004

L1	31	S	PADLOCK (S) PROBE
L2	18		DUP REM L1 (13 DUPLICATES REMOVED)
L3	2	S	L2 NOT PY>=1997
L4	58218	S	ANTISENSE
L5	208	S	L4 (S) HYBRIDIZE
L6	3	S	L5 (P) "DOUBLE STRAN

ANSWER 1 OF 2 MEDLINE on STN
ACCESSION NUMBER: 97128254 MEDLINE
DOCUMENT NUMBER: 97128254 PubMed ID: 8972847
TITLE: Synthesis of full-length oligonucleotides: cleavage of apurinic molecules on a novel support.
AUTHOR: Kwiatkowski M; Nilsson M; Landegren U
CORPORATE SOURCE: Department of Medical Genetics, Uppsala University, Sweden.. marek.kwiatkowski@medgen.uu.se
SOURCE: NUCLEIC ACIDS RESEARCH, (1996 Dec 1) 24 (23) 4632-8. Journal code: 0411011. ISSN: 0305-1048.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970219
Last Updated on STN: 19980206
Entered Medline: 19970130

AB The synthesis of oligodeoxynucleotides is marred by several problems that contribute to the formation of defective molecules. This in turn seriously limits the usefulness of such reagents in DNA diagnostics, molecular cloning, DNA structural analysis and in antisense therapy. In particular, depurination reactions during the cyclical steps of synthesis lead to strand scission during cleavage of the completed molecules from the support. Here we present a remedy to this problem: a novel disiloxyl linkage that connects oligonucleotides to the support withstands reaction conditions that allow the removal of the 5' parts of any depurinated molecules. This ensures that all molecules that preserve the 5' protecting group when cleaved from the support will have both correct 3'- and 5'-ends. We demonstrate the application of the support for synthesis of **padlock probe** molecules.

L3 ANSWER 2 OF 2 EMBASE on STN
ACCESSION NUMBER: 96132238 EMBASE
DOCUMENT NUMBER: 1996132238
TITLE: Detecting genes with ligases.
AUTHOR: Landegren U.; Samiotaki M.; Nilsson M.; Malmgren H.; Kwiatkowski M.
CORPORATE SOURCE: Department of Medical Genetics, Uppsala Biomedical Center, Box 589,S-75123 Uppsala, Sweden
SOURCE: Methods: A Companion to Methods in Enzymology, (1996) 9/1 (84-90).
ISSN: 1046-2023 CODEN: MTHDE
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The combination of synthetic oligonucleotide probes and DNA ligases is central to several recently developed genetic assays. Among the advantages of ligase-mediated gene detection is that ligation of **probe** pairs provides highly specific detection of unique DNA sequences in genomic samples. The technique also allows for convenient distinction between sequence variants, since mismatched bases at the junction of the **probe** pair prevent ligation. Moreover, the circumstance that two probes are joined into one molecule can be exploited for detection in several ways, for instance by observing the change in **probe** size upon ligation. Alternatively, a detectable function on one **probe** can be demonstrated to become linked to a retrievable function on another one through ligation. Ligation products can also be recruited as templates for subsequent ligation reactions in powerful amplification schemes.

So-called **padlock** probes lock to their targets by encircling them, remaining in place even after denaturing washes. Here, we will describe two ligase-mediated assays: one that serves to monitor the presence of common sequence variants in amplified samples of genomic DNA and another that is suitable to detect localized gene sequences.

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